

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES UPGRADING THE PEDESTRIAN TRAFFIC SIGNAL EQUIPMENT TO APS/CPS AT THE INTERSECTION OF MD 410 AND ROSEMARY HILLS DR IN MONTGOMERY COUNTY. MD 410 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE. MD 410 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY. THE ROSEMARY HILLS DR RUNS IN ITS OWN PHASE. THERE IS AN ALTERNATE PEDESTRIAN PHASE FOR THE WEST LEG OF THE INTERSECTION.

III. MONTGOMERY COUNTY/INTERCONNECT SPECIAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES (EXCLUDING INTERCONNECT) TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE. MONTGOMERY COUNTY WILL TERMINATE ALL INTERCONNECT CABLES. THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF ALL WORK. THE APS PUSHBUTTONS SHALL BE DELIVERED TO MR. KEITH LORD (301) 674-8965 AT THE MONTGOMERY COUNTY TECHNICAL CENTER, SIX (6) WEEKS PRIOR TO INSTALLATION.

IV. APS NOTES

PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60"X60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO .2%.

THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.

PUSH BUTTONS ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

APS WILL FUNCTION AS FOLLOWS:

TO CROSS WEST LEG:
A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:
"WAIT TO CROSS EAST-WEST AT ROSEMARY HILLS."
B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

EQUIPMENT LIST

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM	QUANTITY	UNIT	DESCRIPTION
1001	430	LF	REM. OF EXISTING PERM PVMT LINE MARKINGS ANY WIDTH
2002	1	CY	TEST PIT EXCAVATION
5005	110	LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
8001	2	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8002	2	EA	BREAKAWAY PEDESTAL POLE - ANY SIZE
8003	1	EA	FURNISH AND INSTALL 2 WIRE CONTROL UNIT
8004	2	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8005	2	EA	PEDESTRIAN EDUCATION SIGN
8007	1	EA	REMOVE AND DISPOSE PER ASSIGNMENT
8012	110	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8013	40	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8014	2	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8015	2	SF	INSTALL GROUND MOUNTED SIGN
8018	2	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8020	255	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8021	275	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
NEG	75	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
NEG	165	LF	12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)
NFG	30	LF	24" HEAT APPLIED WHITE PERM PREF THERMO PVMT MARKINGS

CONTACTS

The contact persons for District #3 are as follows:

Mr. Brian Young
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Vernon Stinnett
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
Utility Engineer
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: (410) 787-7650

Mr. Kamal Hamud
Phone: (240) 777-8761

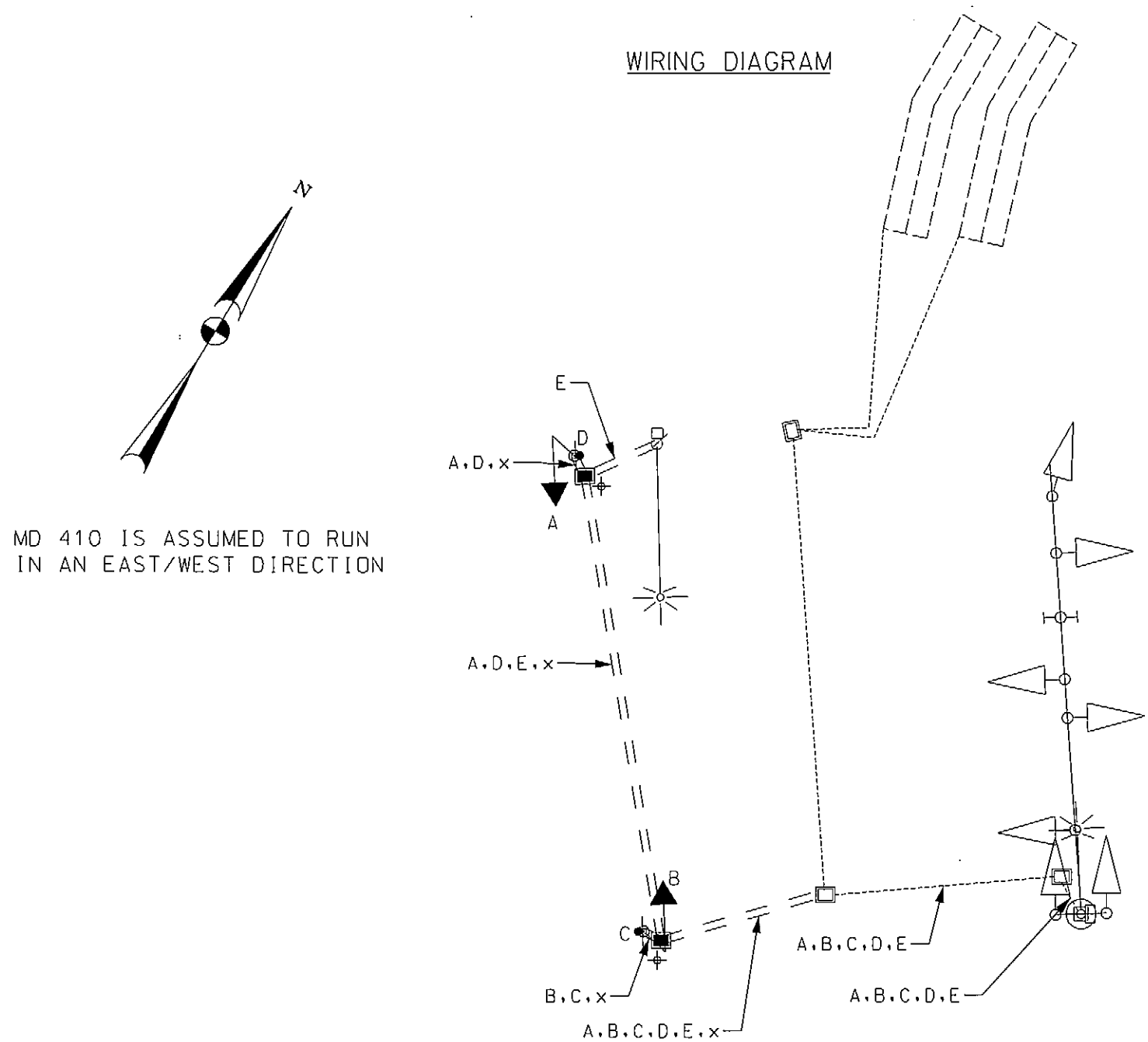
Mr. Keith Lord
Phone: (301) 279-1291

PHASE CHART

1	2	3	4	5	6	7	8	9
(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)

PHASE 2 AND 6	G	G	G	G	R	R	R	DW	DW	←
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	DW	DW	→
PHASE 4	R	R	R	R	G	G	G	DW	DW	↓
4 CHANGE	R	R	R	R	Y	Y	Y	DW	DW	↑
PHASE 4 ALT	R	R	R	R	G	G	G	WK	WK	→
PED CLEARANCE	R	R	R	R	G	G	G	FLDW	FLDW	→
4 ALT CHANGE	R	R	R	R	Y	Y	Y	DW	DW	↑
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	→

WIRING DIAGRAM



WIRING KEY

- A.B } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- C.D } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- E } 12 PAIR INTERCONNECT CABLE
- x } NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- + } GROUND ROD

NOTE: ALL EXISTING TRAFFIC SIGNAL HEAD AND DETECTOR WIRING WILL REMAIN. SEE NOTE III. MONTGOMERY COUNTY /INTERCONNECT SPECIAL NOTES FOR TERMINATION OF NEW WIRES.



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 410 AT ROSEMARY HILLS DR
SILVER SPRING, MD

GENERAL INFORMATION PLAN SHEET

SCALE NTS DATE 01/2010 CONTRACT NO. AX7035168

DESIGNED BY XM COUNTY MONTGOMERY
DRAWN BY XM LOGMILE 15041003.11
CHECKED BY JB TMS NO. K199
F.A.P. NO. TOD NO.

TS NO. 3259A DRAWING - OF SHEET NO. 16 OF 16



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PLOTTED: Tuesday, January 12, 2010 AT 01:39 PM
FILE: P:\09-002 TEDD\Task 16 MD 410 Traffic Signals\Drawings\CADD\Working\RosemaryHills\p93-P000_MD410@RosemaryHillsDr.dgn